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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,122	09/15/2003	Juha Sarmavuori	089229.00097	9082

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EXAMINER	
MALEK, LEILA	
ART UNIT	**PAPER NUMBER**
2611	
MAIL DATE	**DELIVERY MODE**
10/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/662,122	SARMAVUORI, JUHA	
	Examiner	Art Unit	
	Leila Malek	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,12,23,24,35 and 36* is/are rejected.

7)☒ Claim(s) *2-11 and 13-22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09/15/2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *20071002*.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 07/16/2007 have been fully considered but they are not persuasive.

Applicant's Argument: Applicant argues that, "There is no teaching or suggestion in Ghuman of searching a first error bit starting form a chosen end of the searching block".

Examiner's Response: Examiner asserts that as cited in the last office action, Ghuman teaches comparing each byte of data with each byte of sync pattern for each bit position of the byte to generate error counts based on the comparison. Comparing the bytes for each bit position has been interpreted as searching a first error bit and since every single bit has been searched therefore the search has been performed from one end to the other end of the searching block.

Applicant's Argument: Applicant argues that, "There is no teaching or suggestion of counting a number of bit error from the first error bit in a slipped block".

Examiner's Response: Examiner asserts that as cited in the last office action, Ghuman teaches counting a number of bit errors in a slipped block (figure 20, element 438 and Fig. 28, block 614). Since there is no clear definition for slipped block in the body of claim this limitation has been interpreted as broad as possible.

Applicant's Argument: Applicant argues that, "There is no teaching or suggestion in Ghuman of a slip detector that is arranged to detect assumed octet slip, as recited in claim 23".

Examiner's Response: Examiner asserts that as cited in the last office action, Ghuman teaches detecting slip by analyzing the error bits (figure 20, elements 440,442, 445 and figure 21A and Fig. 28, block 614). While Ghuman does not describe specifically using the method to detect octet slips in pulse code modulation, the occurrences of octet slips in pulse-code modulation streams are well known in the art, as discussed by Delfs (paragraph 0096). Since there is no clear definition for assumed octet slip, in the body of claim, therefore the limitation has been interpreted as broad as possible.

2. The following argument with respect to claims 1 and 12 have been considered but are moot in view of the new ground(s) of rejection.

a. "There is no teaching in the cited section of Ghuman of choosing a searching direction".

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations in claims 23, 35, and 36 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 23-36 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. As to claim 23, there is no structural relationship between the limitations.

Claims 24-36 depend on claim 23; therefore they are rejected as well.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 12, 23, 24, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghuman et al. (hereafter, referred as Ghuman) (US 6,081,570) in view of Delfs et al. (hereafter, referred as Delfs) (US 2001/0019958).

Regarding claim 1, Ghuman shows a method for detecting octet (column 14, line 3) slip in a receiver, the method comprising: searching a first error bit starting from a chosen end of a searching block (figure 20, element 436); counting a number of bit errors in a slipped block (figure 20, element 438 and Fig. 28, block 614); and detecting slip by analyzing the error bits (figure 20, elements 440,442, 445 and figure 21A). Ghuman does not expressly disclose choosing a search direction, however inherently there must be a direction for searching the error bits. While Ghuman does not describe specifically using the method to detect octet slips in pulse code modulation, the occurrences of octet slips in pulse-code modulation streams are well known in the art, as discussed by Delfs (paragraph 0096). It would be obvious to one ordinarily skilled in the art to use Ghuman's method to detect octet slips including those in pulse-code modulation streams in order to provide faster and more efficient frame synchronization and improve receiving performance.

Claim 12 reads on the limitations of claim 1 above. Further, Ghuman discloses an in-path equipment (figure 1, element 14),

Regarding claim 23, Ghuman discloses a transmitter (figure 1, element 10), a receiver (element 34), and an in-path equipment (element 14), and a slip detector (figure 20). While Ghuman does not describe detecting octet slips in pulse code modulation, the occurrences of octet slips in pulse-code modulation streams are well

known in the art, as discussed by Delfs (paragraph 0096). It would be obvious to one ordinarily skilled in the art to use Ghuman's method to detect octet slips including those in pulse-code modulation streams in order to provide faster and more efficient frame synchronization and improve receiving performance.

Regarding claim 24, Ghuman shows a method for detecting octet (column 14, line 3) slip in a receiver, the method comprising: searching a first error bit starting from a chosen end of a searching block (figure 20, element 436); counting a number of bit errors in a slipped block (figure 20, element 438 and Fig. 28, block 614); and detecting slip by analyzing the error bits (figure 20, elements 440,442, 445 and figure 21A). Ghuman does not expressly disclose choosing a search direction, however inherently there must be a direction for searching the error bits.

Regarding claim 36, Ghuman shows the slip detector to be arranged into the receiver terminal (figure 1, element 34)

6. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ghuman and Delfs, further in view of Pierson (US 6,487,198).

While Ghuman does not disclose arranging the slip detector in an in-path equipment, because frame slips are common in in-path equipments (see Pierson column 17, lines 32-45), it would be obvious to one ordinarily skilled in the art to incorporate the slip detector of Ghuman into an in-path equipment in order to provide in-path synchronization and save receiver power.

Allowable Subject Matter

7. Claims 2-11 and 13-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leila Malek whose telephone number is 571-272-8731. The examiner can normally be reached on 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leila Malek

Examiner
Art Unit 2611

L.M.

MOHAMMED GHAYOUR
SUPERVISORY PATENT EXAMINER